

Abstract

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A plasma discharger in which, even on a rotating disk-like workpiece, a uniform energy distribution can be obtained over a wide range is provided.

In a plasma discharger in which a pulse voltage is applied to a pair of rod-like discharge electrodes (6) (7) to produce a corona discharge between the discharge electrodes (6) (7), and the surface of a workpiece (W) is irradiated with excited species including plasma produced by the corona discharge, the pair of rod-like discharge electrodes (6) (7) are formed into an asymmetrical shape, and one discharge electrode (6) is formed into a substantially L-like shape. A pointed end (6a) of the discharge electrode (6) is located in an outer peripheral portion of the disk-like workpiece (W) which is treated while involving rotation, a bend-continuous basal end portion of the other discharge electrode (7) which is formed into a substantially V-like shape is located in a rotation center portion of the disk-like workpiece (W) which is treated while involving rotation, and the pointed end (6a) of one discharge electrode (6) and the pointed end (7a) of the other discharge electrode (7) are located at different phase heights on an axis along a plasma ejecting direction.